APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/955,966	09/20/2001	Gregory S. Andre	017750-413	1908

21839 7590 08/23/2005	EXAMINER
BUCHANAN INGERSOLL PC (INCLUDING BURNS, DOANE, SWECKER & MATHIS) POST OFFICE BOX 1404 ALEXANDRIA, VA 22313-1404	AHN, SAM K

ART UNIT	PAPER NUMBER
2637	

DATE MAILED: 08/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/955,966	ANDRE ET AL.
	Examiner	Art Unit
	Sam K. Ahn	2637

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 June 2005*.

2a)☒ This action is **FINAL.**   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-9* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *20 September 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bastiani

et al., USP 6,609,167 B1 (Bastiani, cited previously) in view of Wilson et al. USP

6,718,413 B1 (Wilson).

Regarding claim 1, Bastiani teaches a transceiver (172 in Fig.10) for use within a

multi-tier system bus configuration comprising: means for independently

receiving and transmitting instructions (368 in Fig.41) via the system bus (166 in

Fig.10) from one or more devices (106 in Fig.10) connected to the system bus,

means for buffering instructions received and transmitted (354, 356, 358, 360,

362, 364, 366 in Fig.41) via the system bus, wherein said means for

independently receiving instructions is configured to discriminate between

different types of input, and wherein said means for independently transmitting

instructions is configured to inteleave said instructions (as taught by Bastiani,

DMA instructions are buffered in 356,358,360 elements, while HCI instructions

including interrupt are buffered in a separate memory (362,364,366), thus

discriminating and interleaving the packets being transmitted and received (note col.48, lines 50-67).

However, Bastiani does not explicitly teach wherein access to the multi-tier system bus is arbitrated.

Wilson teaches, in the same field of endeavor, wherein access to the multi-tier system bus (308 in Fig.3) is arbitrated (note col.3, line 66 – col.4, line 12, wherein different devices are arbitrating for the system bus).

Bastiani teaches converting parallel data into serial data (by 370 in Fig.41), while Wilson teaches implementing a function of arbitrating for the system bus. Therefore, it would have been obvious to one skilled in the art at the time of the invention to incorporate the teaching of Wilson in the system of Bastiani by having the function of arbitrating in the host controller (104a in Fig.10 of Bastiani) during the arbitrating phase (402,414 in Fig.2 of Wilson) for the purpose of reducing the number of interrupts, as taught by Wilson (note col.3, line 66 – col.4, line 12) and further, increase the data rate in the system bus as the system bus will be occupied by the devices contending the system bus, as opposed to converting parallel data to serial data.

Regarding claims 2 and 5, Bastiani in view of Wilson teach all subject matter claimed, as applied to claim 1. Bastiani further teaches wherein said means for independently transmitting is configured to interleave the instructions based upon

instruction type (wherein the instruction types are divided between DMA and HCI,

as explained above).

Regarding claims 3 and 6, Bastiani in view of Wilson all subject matter claimed,

as applied to claim 2 or 5. Bastiani further teaches wherein said instructions are

contained within packets and said means for independently transmitting is

configured to interleave the instructions based upon packet type (as separate

memories are buffers are implemented depending on the packet type).

Regarding claims 4 and 7, Bastiani in view of Wilson all subject matter claimed,

as applied to claim 3 or 6. Bastiani further teaches wherein said packets

comprise DMA and CA (control action or control interrupt or HCI) packet types

(note col.48, lines 57-59).

Regarding claim 8, Bastiani in view of Wilson all subject matter claimed, as

applied to claim 1. Bastiani further teaches wherein said means for receiving is

configured to provide specialized control functions, such as a reset function (see

Fig.26 and note col.42, lines 26-28).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bastiani et al., USP 6,609,167 B1 (Bastiani, cited previously) in view of Wilson et al. USP 6,718,413 B1 (Wilson) and Gephardt et al., USP 5,555,430 (Gephardt, cited previously).

Regarding claim 9, Bastiani in view of Wilson teach all subject matter claimed, as applied to claim 8. As explained previously, Bastiani further teaches said specialized control functions, such as a reset function. However, Bastiani does not explicitly teach further control functions of a timer function and a broadcast function.

Gephartdt teaches in the same field of endeavor, having a system bus wherein packets are transmitted and received from the system bus and further teaches such control functions of the timer (timer latency) and broadcast (broadcast interrupt) functions (note col.22, line 61 – col.23, line 17). Therefore, it would have been obvious to one skilled in the art at the time of the invention to include the functions of timer and broadcast, as taught by Gephartdt in Bastiani's system for the purpose of increasing the control functions, and thus provide the system with a more controllable system through the control functions.

Conclusion

3. Applicant's amendment necessitated the new ground(s) of rejection presented in this

Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37

CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire

THREE MONTHS from the mailing date of this action. In the event a first reply is

filed within TWO MONTHS of the mailing date of this final action and the advisory

action is not mailed until after the end of the THREE-MONTH shortened statutory

period, then the shortened statutory period will expire on the date the advisory action

is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from

the mailing date of the advisory action. In no event, however, will the statutory

period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from
the examiner should be directed to Sam Ahn whose telephone number is (571)
272-3044. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the
examiner's supervisor, Jay Patel can be reached on (571) 272-2988. The fax
phone number for the organization where this application or proceeding is
assigned is 571-273-8300.

Information regarding the status of an application may be obtained from
the Patent Application Information Retrieval (PAIR) system. Status information
for published applications may be obtained from either Private PAIR or Public
PAIR. Status information for unpublished applications is available through
Private PAIR only. For more information about the PAIR system, see http://pair-
direct.uspto.gov. Should you have questions on access to the Private PAIR
system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-
free).

Sam K. Ahn
8/18/05

TEMESGHEN GHEBRETINSAE
PRIMARY EXAMINER